Role of Behavioral Factors in Disease & Disorder

1. Lifestyle Choices: Behaviors like diet, physical activity, smoking, and alcohol consumption can have a profound impact on the risk of chronic diseases such as heart disease, diabetes, and certain cancers. Unhealthy lifestyle choices can increase the likelihood of developing these conditions.
2. Stress and Mental Health: Chronic stress and poor mental health can contribute to a wide range of health issues, including cardiovascular problems, immune system suppression, and exacerbation of existing conditions. Behavioral interventions, like stress management and cognitive-behavioral therapy, can mitigate these effects.
3. Adherence to Medical Treatment: Patients' adherence to prescribed medical treatments, such as medication regimens, physical therapy, or lifestyle modifications, is a critical behavioral factor that can influence the effectiveness of healthcare in managing and treating diseases.
4. Preventive Health Behaviors: Engaging in preventive health behaviors like vaccination, regular screenings, and early disease detection can significantly reduce the risk of disease or lead to early intervention, improving health outcomes.
5. Sleep and Rest: Poor sleep patterns and sleep disorders can have detrimental effects on health, contributing to conditions like obesity, hypertension, and mental health issues. Behavioral changes to improve sleep quality are often part of treatment.
6. Safety Practices: Behaviors related to safety, such as seatbelt use, helmet use, and practicing safe sex, can prevent injuries and reduce the spread of infectious diseases.
7. Diet and Nutrition: Dietary choices can impact the risk of chronic conditions, including obesity, diabetes, and cardiovascular disease. Positive dietary behaviors, like consuming a balanced and nutritious diet, can improve overall health.
8. Physical Activity: Regular physical activity is associated with numerous health benefits, including weight management, improved cardiovascular health, and enhanced mental well-being.
9. Substance Abuse: Substance abuse behaviors, including drug and alcohol misuse, can lead to addiction, negatively affecting physical and mental health.
10. Behavioral Addictions: Compulsive behaviors like excessive gaming, gambling, or internet use can lead to addiction and have adverse consequences on mental health and relationships.
11. Social Support and Relationships: Social interactions and supportive relationships are essential for mental and emotional well-being. A lack of social support can contribute to stress and depression.

Health compromising behaviours

Actions or habits that have a negative impact on an individual's physical, mental, or emotional well-being. Some common characteristics of health-compromising behaviors include:

1. Risk-Taking: Health-compromising behaviors often involve taking risks that can lead to adverse health outcomes. These risks may include behaviors like smoking, excessive alcohol consumption, or unsafe sexual practices.
2. Negative Impact on Health: These behaviors are associated with a detrimental impact on an individual's physical or mental health. They can contribute to the development or exacerbation of health conditions, leading to a lower quality of life.
3. Addictive Nature: Some health-compromising behaviors, such as substance abuse or compulsive gambling, are characterized by addictive tendencies. Individuals may find it challenging to control or stop these behaviors.
4. Short-Term Gratification: Many health-compromising behaviors offer short-term gratification or relief, even if they result in long-term harm. For example, overeating or consuming high-sugar foods may provide temporary comfort but can lead to obesity and related health issues.
5. Social and Cultural Influences: Social and cultural factors can play a significant role in these behaviors. Peer pressure, societal norms, or cultural practices may encourage or normalize actions that are detrimental to health.
6. Lack of Awareness: In some cases, individuals engaging in health-compromising behaviors may not be fully aware of the potential consequences or may underestimate the risks involved.
7. Resistance to Change: Changing health-compromising behaviors can be challenging. Individuals may resist making changes due to addiction, habit, or fear of withdrawal symptoms.
8. Coping Mechanisms: Some individuals turn to health-compromising behaviors as coping mechanisms for stress, anxiety, or emotional distress. These behaviors provide temporary relief but do not address the underlying issues.
9. Reinforcement: Positive reinforcement, like the pleasurable feelings experienced during certain health-compromising behaviors, can contribute to their continuation.
10. Psychological Factors: Mental health issues, such as depression or anxiety, may be linked to health-compromising behaviors as individuals seek relief or escape from emotional pain.

Anorexia Nervosa

Anorexia nervosa, often referred to as anorexia, is a complex psychological disorder characterized by an intense fear of gaining weight, a distorted body image, and extreme efforts to restrict food intake, leading to significantly low body weight. Here are some key psychological aspects and features of anorexia:

1. Body Image Distortion: Individuals with anorexia often have a distorted perception of their body size and shape. They may perceive themselves as overweight even when they are severely underweight.
2. Fear of Weight Gain: An intense fear of gaining weight or becoming fat is a central feature of anorexia. This fear drives the restrictive eating behaviors.
3. Dietary Restriction: Anorexic individuals typically engage in extreme dietary restriction, severely limiting caloric intake and often avoiding specific foods or food groups.
4. Preoccupation with Food and Eating: Constant thoughts about food, calories, and meal planning can consume an individual's mental and emotional energy.
5. Perfectionism: Many individuals with anorexia are perfectionistic and have high standards for themselves. They often tie their self-worth to their ability to control their eating and weight.
6. Denial of Severity: Anorexic individuals may deny the seriousness of their condition, making it challenging for them to seek help.
7. Social Withdrawal: Social isolation and withdrawal from friends and family can occur as a result of the preoccupation with food and the desire to hide weight loss.
8. Depression and Anxiety: Anorexia is often comorbid with depression and anxiety disorders, which can contribute to the development and maintenance of the eating disorder.
9. Physical Consequences: The psychological aspects of anorexia can lead to severe physical health consequences, including malnutrition, electrolyte imbalances, heart problems, and osteoporosis.
10. Control Issues: For some individuals, anorexia represents a way to exert control over their lives when other aspects feel overwhelming or out of control.
11. Rigidity: Anorexic individuals often exhibit rigid thinking and behavior patterns related to food and eating, which can be difficult to change.

Treatment for anorexia typically involves a multidisciplinary approach, including medical, nutritional, and psychological interventions.

Bulimia

Bulimia nervosa, commonly referred to as bulimia, is a psychological disorder characterised by recurrent episodes of binge eating followed by compensatory behaviors to prevent weight gain. Here are some key psychological aspects and features of bulimia:

1. Binge Eating: Binge episodes involve consuming large amounts of food in a short period while feeling a loss of control. This is often accompanied by intense emotional distress.
2. Compensatory Behaviors: After binge eating, individuals with bulimia typically engage in compensatory behaviors, such as self-induced vomiting, laxative use, excessive exercise, or fasting, to "undo" the effects of the binge.
3. Secrecy and Shame: Bulimic behaviors are often carried out in secret due to feelings of shame and embarrassment about the disorder, making it challenging to identify or seek help.
4. Body Image Disturbance: Individuals with bulimia frequently have a distorted body image and may perceive themselves as overweight, even when their weight is in a normal range or underweight.
5. Cyclic Patterns: Bulimia often follows a cyclical pattern of binge-eating and compensatory behaviors, leading to a sense of relief and control during the purge phase, followed by guilt and anxiety, and a return to binge eating.
6. Mood Disturbances: Bulimia is associated with mood disturbances, including anxiety and depression, which may contribute to the development and maintenance of the disorder.
7. Lack of Satiety: Many individuals with bulimia experience a persistent feeling of never being satisfied, which may drive binge-eating episodes.
8. Health Consequences: The psychological aspects of bulimia can lead to severe physical health consequences, including electrolyte imbalances, dental issues, and gastrointestinal problems.
9. Dietary Restraint: Efforts to control eating between binge episodes can include rigid dietary restraint, which can intensify the desire to binge eat.
10. Control and Perfectionism: Similar to anorexia, individuals with bulimia may exhibit perfectionistic tendencies and a desire for control, which can extend to their eating behaviors.
11. Social Isolation: Bulimic behaviors and the secrecy surrounding them can lead to social isolation and withdrawal from friends and family.

Treatment for bulimia typically involves a combination of psychological interventions, such as cognitive-behavioral therapy (CBT), dialectical behavior therapy (DBT), and interpersonal therapy.

Alcoholism

Alcoholism, also known as alcohol use disorder (AUD), is a chronic and progressive condition characterized by an individual's inability to control their alcohol consumption despite negative consequences. It can have severe physical, psychological, and social effects. Some key aspects of alcoholism include:

1. Craving: An intense desire or compulsion to consume alcohol, often leading to the inability to resist drinking.
2. Loss of Control: Individuals with alcoholism find it challenging to limit the amount of alcohol they consume, frequently drinking more than they initially intended.
3. Physical Dependence: Over time, the body can become physically dependent on alcohol, leading to withdrawal symptoms when not drinking. This can result in a cycle of continued drinking to avoid discomfort.
4. Tolerance: Increased tolerance means that an individual requires more alcohol to achieve the desired effect. This often leads to increased consumption.
5. Neglecting Responsibilities: Alcoholism can lead to the neglect of important responsibilities at work, school, or home due to drinking.
6. Continued Use Despite Consequences: Despite negative effects on physical health, relationships, or legal issues, individuals with alcoholism continue to drink.
7. Reduction of Social Activities: Individuals may withdraw from social activities, hobbies, or interests they once enjoyed in favor of alcohol use.
8. Time Spent Obtaining and Using Alcohol: A significant amount of time is spent on activities related to obtaining, consuming, or recovering from the effects of alcohol.
9. Failed Attempts to Cut Down or Control Drinking: Repeated but unsuccessful efforts to cut down on alcohol consumption.
10. Neglected Physical Health: Alcoholism often leads to neglect of physical health, resulting in a range of health issues, including liver disease, cardiovascular problems, and cognitive impairment.
11. Mood Changes: Individuals with alcoholism may experience mood swings, depression, anxiety, and other mental health issues as a result of their drinking.
12. Loss of Relationships: Alcoholism can damage personal relationships, leading to isolation and alienation from friends and family.
13. Risk-Taking Behavior: Individuals with alcoholism may engage in risky behavior, including drunk driving and risky sexual activity.

Obesity

Factors contributing to obesity -

1. Energy Balance: Obesity often results from a chronic positive energy balance, where the calories consumed through food and drinks exceed the calories expended through metabolism and physical activity.
2. Adipose Tissue: Adipose tissue, or body fat, plays a central role in obesity. It stores excess energy in the form of triglycerides. In obese individuals, there is an increased accumulation of fat in adipose tissue.
3. Hormonal disruption: insulin, leptin, and ghrelin leading to increased appetite and reduced energy expenditure.
4. Inflammation: Obesity is associated with chronic low-grade inflammation. Adipose tissue secretes inflammatory molecules, and this inflammation can contribute to various health problems associated with obesity.
5. Insulin Resistance: Many obese individuals develop insulin resistance, where the body's cells don't respond effectively to insulin, leading to elevated blood sugar levels. This can increase the risk of type 2 diabetes.
6. Fat Cell Size and Number: Obese individuals often have larger fat cells (adipocytes) and sometimes an increased number of fat cells. This can make it more challenging to lose weight and maintain weight loss.
7. Genetic Factors: influence - susceptibility to obesity, metabolism and how the body stores and uses fat.
9. Diet: consumption of high-calorie, low-nutrient foods and excessive sugar and fat
10. Physical Activity: Lack of exercise reduces the number of calories burned, making it easier to accumulate excess body fat.
11. Environment: . Access to healthy food options, safe spaces for physical activity, and socioeconomic factors all play a role.
12. Psychological Factors: Emotional eating, stress, and depression can lead to overeating and weight gain.
13. Medications: Certain medications, such as corticosteroids and some antidepressants, can lead to weight gain as a side effect.
14. Lack of Sleep: Sleep deprivation can disrupt hormonal balance and lead to increased appetite and weight gain.
15. Eating Behaviors: Factors like eating too quickly, frequent snacking, and large portion sizes can contribute to overeating and obesity.
16. Cultural and Social Influences: Cultural norms, social pressures, and peer influences can affect an individual's eating habits and physical activity levels.
17. Marketing and Advertising: The marketing of high-calorie, low-nutrient foods and beverages can influence food choices and consumption patterns.
18. Lack of Education: Limited knowledge about nutrition and healthy eating can result in poor dietary choices.
19. Urbanization: Urban environments may encourage sedentary behaviors and reliance on processed, convenient foods, which can contribute to obesity.

Obesity is associated with numerous health risks and complications, including:

1. Cardiovascular Disease: hypertension, atherosclerosis, and heart attacks. It can also lead to stroke and other circulatory problems.
2. Type 2 Diabetes: Excess fat can lead to insulin resistance, where the body's cells don't respond effectively to insulin, resulting in elevated blood sugar levels.
3. Respiratory Issues: sleep apnea, obesity hypoventilation syndrome, and asthma.
4. Joint Problems: The extra weight places additional strain on joints, which can lead to conditions like osteoarthritis and chronic pain in weight-bearing joints, such as the knees and hips.
5. Cancer: Obesity is associated with an increased risk of several types of cancer, including breast, colon, kidney, and endometrial cancer.
6. Liver Disease: Non-alcoholic fatty liver disease (NAFLD). It can progress to more severe liver conditions, such as non-alcoholic steatohepatitis (NASH) and cirrhosis.
7. Gastrointestinal Issues: increased risk of gastroesophageal reflux disease (GERD), gallbladder disease, and hernias.
8. Mental Health: depression and anxiety, often due to social stigmatization and the psychological impact of obesity.
10. Kidney Disease: chronic kidney disease and kidney stones.
11. Dermatological Issues: skin infections, due to skin folds and increased sweating.

TREATMENT

The treatment of obesity involves a multifaceted approach that addresses the underlying factors contributing to excess body weight. Here are some key components of obesity treatment:

1. Lifestyle Modifications:
   - Dietary Changes: a balanced, calorie-controlled diet nutrient-dense foods - Portion Control: to avoid overeating.
   - Regular Physical Activity:aiming for a combination of aerobic and strength exercises.
   - Behavioral Therapy: Cognitive-behavioral therapy can help individuals change their eating and exercise behaviors.
2. Medical Interventions:
   - Medications: In some cases, healthcare professionals may prescribe medications to aid weight loss. These medications are typically used in combination with lifestyle changes.
   - Weight-Loss Programs: Joining a structured weight-loss program or working with a dietitian or nutritionist for guidance and support.
3. Surgery:
   - Bariatric Surgery: Surgical options, such as gastric bypass or gastric sleeve surgery, may be considered for severely obese individuals when other methods have not been successful. These surgeries restrict the amount of food the stomach can hold and can lead to significant weight loss.
4. Support and Counseling:
   - Psychological Counseling: Addressing emotional factors and stress that may contribute to overeating.
   - Support Groups: Participating in support groups can provide encouragement, motivation, and a sense of community for individuals working to lose weight.
5. Nutritional Education:
   - Nutritional Counseling: Working with a registered dietitian can provide personalized guidance on healthy eating habits and meal planning.
6. Monitoring and Follow-Up:
   - Regular medical check-ups to monitor progress and make necessary adjustments to the treatment plan.
7. Long-Term Maintenance:
   - Learning how to maintain weight loss and adopt lifelong healthy habits to prevent weight regain.

Smoking

Smoking is the act of inhaling and exhaling the smoke produced by burning tobacco or other substances. It is a major public health concern due to its well-established negative health consequences. Here are some key points related to smoking:

1. Health Consequences: Smoking is the leading cause of preventable deaths worldwide. It is linked to numerous health problems, including lung cancer, heart disease, respiratory issues, and various cancers throughout the body.
2. Nicotine Addiction: Nicotine, a highly addictive substance found in tobacco, is a primary reason people become addicted to smoking. It stimulates the release of dopamine in the brain, creating a sense of pleasure and reinforcement.
3. Social and Cultural Factors: Smoking is often influenced by social and cultural factors. Peer pressure, family influences, and cultural norms can play a role in starting and continuing to smoke.
4. Mental Health: Smoking is more prevalent among individuals with mental health conditions such as depression and anxiety. Some may use smoking as a coping mechanism.
5. Secondhand Smoke: Secondhand smoke, also known as passive smoke, can have detrimental health effects on nonsmokers, especially children and pregnant women who are exposed to it.
6. Tobacco Industry: The tobacco industry has played a significant role in promoting and marketing cigarettes. Anti-smoking campaigns and regulations have aimed to reduce the influence of the industry.
7. Cessation and Support: Quitting smoking can be challenging due to nicotine addiction. Many individuals seek support through smoking cessation programs, nicotine replacement therapies, and prescription medications to help them quit.
8. Healthcare Costs: Smoking-related illnesses place a substantial burden on healthcare systems and result in significant medical costs.
9. Tobacco Control Efforts: Governments and health organizations worldwide have implemented policies and regulations to reduce smoking rates, including tobacco taxes, smoking bans in public places, and graphic warning labels on cigarette packages.
10. Emerging Forms of Tobacco Use: While traditional cigarette smoking has decreased in some regions, alternative forms of tobacco use, such as e-cigarettes and vaping, have gained popularity, raising concerns about their long-term health effects.

Mechanisms of drug action

The mechanisms of drug action refer to how drugs interact with the body to produce their effects. There are various ways drugs can act within the body. Here are some of the key mechanisms:

1. Receptor Binding: Receptors are proteins on the surface of cells or within cells that are involved in signaling processes. When a drug binds to a receptor, it can either activate (agonist) or block (antagonist) the receptor, leading to a biological response.
2. Enzyme Inhibition: Some drugs work by inhibiting enzymes, which are proteins that catalyze chemical reactions in the body. By blocking specific enzymes, drugs can disrupt biochemical pathways and processes.
3. Ion Channels: Drugs can affect ion channels, which control the movement of ions (charged particles) across cell membranes. Modulating ion channels can influence the electrical activity of cells, such as in nerve cells or muscle cells.
4. Transporter Proteins: Drugs can interact with transporter proteins that regulate the movement of molecules in and out of cells. This can impact the concentration of various substances within cells.
5. Altering Neurotransmission: Many drugs, particularly those that affect the central nervous system, work by influencing neurotransmission. They can affect the release, reuptake, or receptor binding of neurotransmitters, which are chemical messengers in the brain.
6. Pharmacokinetics: This refers to how drugs move through the body, including processes like absorption, distribution, metabolism, and excretion. These factors influence the drug's concentration in the body and its duration of action.
8. Hormonal Regulation: Hormone-modulating drugs can affect the production, release, or activity of hormones in the body. This is often used in hormone replacement therapy or to regulate endocrine disorders.
9. Anti-Inflammatory Effects: Some drugs, like nonsteroidal anti-inflammatory drugs (NSAIDs), work by reducing inflammation in the body. They often inhibit enzymes involved in the inflammatory process.
10. Chemical Reactions: Some drugs undergo chemical reactions in the body to form active metabolites. These metabolites can then produce the desired therapeutic effect.
11. Placebo Effect: In some cases, the belief in a drug's effectiveness can lead to a psychological response that mimics the drug's actual action. This is known as the placebo effect.

Models of Addiction- Biomedical Models, Reward Models, Social Learning

Biomedical

The biomedical model of addiction is a perspective that views addiction primarily as a result of biological factors, including genetics, brain chemistry, and physiological processes. It focuses on the physical and medical aspects of addiction while downplaying or minimizing the role of psychological, social, or environmental factors. Here are key features of the biomedical model of addiction:

1. Genetics: This model emphasizes genetic predispositions to addiction, suggesting that some individuals may be more biologically vulnerable to developing addictive behaviors due to their family history.
2. Neurochemistry: It highlights the role of brain chemistry and neurotransmitters, such as dopamine, in addiction. According to this perspective, addictive substances or behaviors can alter the brain's reward system, leading to cravings and dependence.
3. Tolerance and Withdrawal: The biomedical model places significance on the development of tolerance (needing increasing amounts of a substance for the same effect) and withdrawal symptoms (unpleasant physical and psychological symptoms when the substance is not used) as indicators of physical addiction.
4. Brain Changes: This model suggests that addiction is associated with measurable changes in brain structure and function, which can be observed through neuroimaging studies. These changes may contribute to compulsive drug-seeking behavior.
5. Pharmacological Treatments: Approaches aligned with the biomedical model often focus on pharmacological interventions, such as medications that target specific neurochemical processes, to treat addiction.
6. Limited Emphasis on Psychological or Social Factors: The biomedical model tends to underemphasize the psychological, social, and environmental factors that contribute to addiction. It may not fully consider the role of stress, trauma, social influences, or mental health conditions in addiction development.

Critics of the biomedical model argue that it oversimplifies addiction by neglecting the multifaceted nature of the disorder. They emphasize the importance of psychosocial factors, such as stress, trauma, peer pressure, and coping mechanisms, in understanding addiction. The biopsychosocial model of addiction, which integrates biological, psychological, and social elements, offers a more comprehensive framework for understanding addiction and guiding effective prevention and treatment strategies.

Reward model

The reward model of addiction, often referred to as the reward pathway or reward system, focuses on how the brain's reward and pleasure mechanisms play a central role in addiction. It posits that the pursuit of rewarding or pleasurable experiences is a primary driver of addictive behavior. Here are key features of the reward model of addiction:

1. Dopaminergic Pathways: Addictive substances and behaviors are believed to stimulate the release of dopamine in the brain, leading to feelings of pleasure and reinforcing the desire to repeat the behavior.
2. Mesolimbic Pathway: The mesolimbic pathway, a neural circuit connecting the midbrain to the limbic system, is considered a key component of the brain's reward system.
3. Positive Reinforcement: Addictive substances or behaviors provide positive reinforcement by creating pleasurable sensations, which encourage individuals to engage in the behavior repeatedly. This is thought to contribute to the development and maintenance of addiction.
4. Craving and Compulsion: The intense pleasure experienced during the early stages of addiction can lead to the development of cravings and compulsive behaviors, as individuals seek to reproduce those pleasurable feelings.
5. Tolerance and Dependence: Over time, repeated exposure to addictive substances or behaviors can lead to tolerance (needing more to achieve the same effect) and physical or psychological dependence.
6. Withdrawal Symptoms: When the substance or behavior is removed, withdrawal symptoms may occur, which can be physically and psychologically distressing. These symptoms can reinforce continued use to alleviate discomfort.
7. Cues and Triggers: Environmental cues associated with the addictive behavior, such as a specific location or social context, can trigger cravings and relapse, as they become associated with the pleasurable effects.
8. Diminished Control: The reward model recognizes that individuals with addiction often struggle to control their impulses and may continue to engage in the behavior despite negative consequences.
9. Hijacking of Brain Circuitry: The model suggests that addiction can effectively hijack the brain's reward circuitry, making it difficult for individuals to resist engaging in the addictive behavior.

Social learning model

The social learning model of addiction emphasizes the role of social and environmental factors in the development and maintenance of addictive behaviors. This model is based on the principles of social learning theory, which suggests that individuals learn from observing and interacting with others. Here are key features of the social learning model of addiction:

1. Observational Learning: Individuals may acquire addictive behaviors by observing and imitating the actions of others, especially role models or peers who engage in substance abuse or addictive behaviors.
2. Modeling: People often mimic the behaviors, attitudes, and beliefs of those they look up to or those they interact with regularly. In the context of addiction, this could involve imitating a family member, friend, or community member who uses substances or engages in addictive behaviors.
3. Social Norms and Acceptance: The social environment can establish norms and expectations regarding substance use or addictive behaviors. Individuals may be more likely to engage in these behaviors if they believe it is socially acceptable or even expected.
4. Peer Influence: Peer pressure can be a powerful factor in the initiation and maintenance of addictive behaviors. Individuals may start or continue using substances or engaging in addictive activities because their peers are doing so.
5. Reinforcement: Social settings and peer interactions can provide reinforcement for substance use or addictive behaviors. Experiencing social acceptance or rewards from peers for engaging in these activities can make them more appealing.
6. Coping Mechanisms: Social learning theory acknowledges that individuals may adopt addictive behaviors as a way to cope with stress, peer pressure, or social challenges. These behaviors may serve as coping mechanisms or sources of comfort in a particular social context.
7. Intergenerational Transmission: Family environments play a significant role in the social learning model of addiction. Children growing up in households where substance use or addictive behaviors are prevalent may be more likely to adopt these behaviors as adults.
8. Social and Cultural Factors: Cultural norms, advertising, and media can contribute to the acceptance and promotion of addictive behaviors. Social learning theory considers the impact of these broader social and cultural influences.

Role of Behavioral Factors in Disease

- Lifestyle
- Stress & Coping
- Substance Abuse
- Adherence to Medical Treatment
- Sleep & Rest
- Diet & Nutrition
- Physical Activity
- Social Support

Health Compromising Behaviors

- Risk Taking
- Substance abuse
- Over or under eating
- Social Influences
- Lack of Awareness
- Resistance to change
- Coping Mechanisms
- Reinforcement of Compromising Behavior

Anorexia Nervosa	Bulimia
Body Image Distortion	Body Image Distortion
Dietary Restriction	Dietary Restriction
Perfectionism	Perfectionism
Control Issues	Control Issues
Social Isolation	Social Isolation
Consequences - malnutrition	Consequences - electrolyte imbalance
Fear of weight Gain	Compensatory Behaviors - self induced vomiting
Constant thoughts of food, calories, meal planning	Secrecy & Shame
Denial of Severity	Cyclic Patterns
Depression & Anxiety	Mood Disturbances
Rigidity	Lack of Satiety

Alcoholism

- Craving
- Loss of Control
- Physical Dependence
- Tolerance
- Neglecting Responsibilities
- Continued Use Despite Consequences
- Reduction of Social Activities
- Time Spent Obtaining & Using Alcohol
- Neglected Physical Health
- Mood Changes
- Loss of Relationships
- Risk Taking Behaviors

Smoking

- Health Consequences
- Nicotine Addiction
- Social & Cultural Factors
- Mental Health
- Second Hand Smoke
- Cessation & Support
- Healthcare costs
- Tobacco Industry promoting cigarettes

Mechanism of drug action

- Receptor Binding - lead to biological response
- Enzyme Inhibition - drugs disrupt biochemical pathways through this
- Ion channels - Affected - Influence electrical activity
- Transporter Proteins - Regulate the movement of molecules in & out of cells.
- Altering Neurotransmission - affect release, reuptake or receptor binding of neurotransmitters.
- Hormone Regulation
- Anti Inflammatory effect of some drugs.
- Chemical Reactions - to form metabolites -> produce desired effect

Obesity

Factors

- Energy Balance - Obesity from + energy balance where the consumed calories exceed calories expended through metabolism & physical activity
- Adipose Tissue - In Obese - ↑ accumulation of fat in adipose tissue
- Hormonal Disruption of insulin, leptin & ghrelin
- Inflammation - Adipose tissue secrete inflammatory molecules which lead to inflammati
- Insulin Resistance - cells don't respond to insulin -> ↑ blood sugar
- Fat Cell Size & No. - Obese have large and more no. of fat cells.
- Genes
- Diet
- Physical Activity
- Medication
- Environment - Access to healthy food options, space for physical activity.
- Eating Behaviors - Binge eating, eating quickly.

Health Risks

- Hypertension
- Heart Attacks
- Stroke
- Circulatory Problem
- Type 2 Diabetes due to insulin resistance
- Sleep apnea, Asthma
- Joint Problems
- Cancer - Breast, colon, kidney
- Liver Disease - cirrhosis
- Depression, Anxiety
- Skin infections due to skin folding

Treatment

- Lifestyle modifications
  - Diet
  - Exercise
  - Therapy
- Medical Intervention
  - Medication
  - Weight Loss Program
- Surgery -> Bariatric Surgery - gastric surgery
- Psychological Counseling
- Nutrition Education
- Regular medical check up
- Long term maintenance

Models of Addiction

Biomedical

- Genetics
- Neurochemistry - Substances alter brain's reward system leading to craving
- Tolerance & Withdrawal
- Brain Changes - Structure, function
- Limited Emphasis on Psychological or Social Factors

Reward

- Dopamine Pathways - stimulate release of dopamine
- Positive Reinforcement
- Cravings & Compulsion
- Tolerance & Dependence
- Withdrawal Symptoms
- Cues & Triggers
- Diminished Control

Social Learning

- Observational Learning
- Modelling
- Social Norms & Acceptance
- Peer Influence
- Reinforcement
- Social & Cultural Factors
- Coping Mechanisms